

HERPETOLOGY.—*Contributions to the herpetology of Maryland and Delmarva, No. 17: Southeastern herptiles with northern limits on coastal Maryland, Delmarva, and New Jersey.* CLYDE F. REED, Reed Herpetorium, Baltimore, Md.

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While studying the flora of southeastern United States, the author has observed that various southern herptiles also find their northern limits in our region. About 75 species of plants with a general distribution southward to Florida have their northern limit in Maryland, on Delmarva or in southern New Jersey. Most of these species of plants having the said distribution are found on the Outer Coastal Plain. Their northern limit, known at the present time, has been annotated in a botanical paper by the author dealing with the northern extensions of the southern coastal flora.

Most notable of the species of plants finding their northern limit in Maryland or on the Delmarva Peninsula are: *Taxodium distichum* (cypress), *Tillandsia usneoides* (Spanish moss), *Quercus virginiana* (live oak), *Xanthoxylum clava-herculis*, *Bignonia capreolata*, *Trillium pusillum* var. *virginianum*, *Berchemia scandens*, *Symplocos tinctoria*, *Borrchia frutescens*, and *Passiflora incarinata*.

There are 21 herptiles that have a similar southern Coastal Plain distribution and have their northern limitations in Maryland, on Delmarva or in southern New Jersey. A couple of the species range more northward into southern New England and Massachusetts. However, some of the southern Coastal Plain plants also range northward into New Jersey, Long Island, and Massachusetts.

1. *Rana virgatipes* Cope. Atlantic Coastal Plain from southern New Jersey to southeastern Georgia. New Jersey (Atlantic, TYPE LOCALITY; Burlington, Monmouth, Essex, Cape May, Mercer, Ocean); Delaware (Sussex); Maryland (Dorchester, Worcester, and Charles). See Reed, *Contributions to the herpetology of Maryland and Delmarva, No. 16*, in *Herpetologica*, 1957. Map 1 (●).

2. *Hyla femoralis* Sonnini and Latreille. Lower Coastal Plain from southern Maryland and southeastern Virginia to eastern Louisiana. Maryland

(Calvert: Battle Creek, see Fowler, *Maryland Journ. Nat. Hist.* **17**(1): 6-7, 1947). Map 1(×).

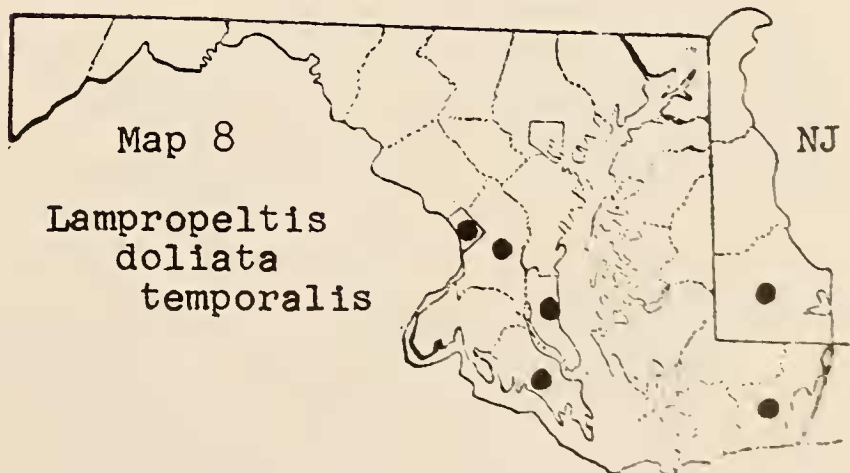
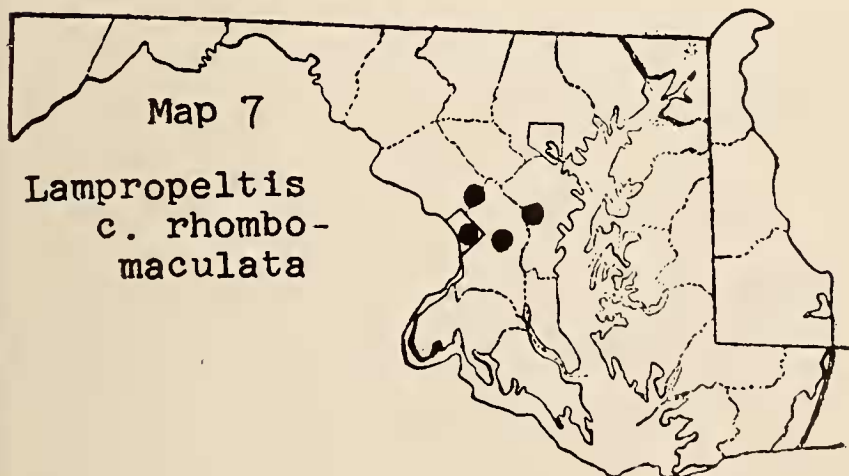
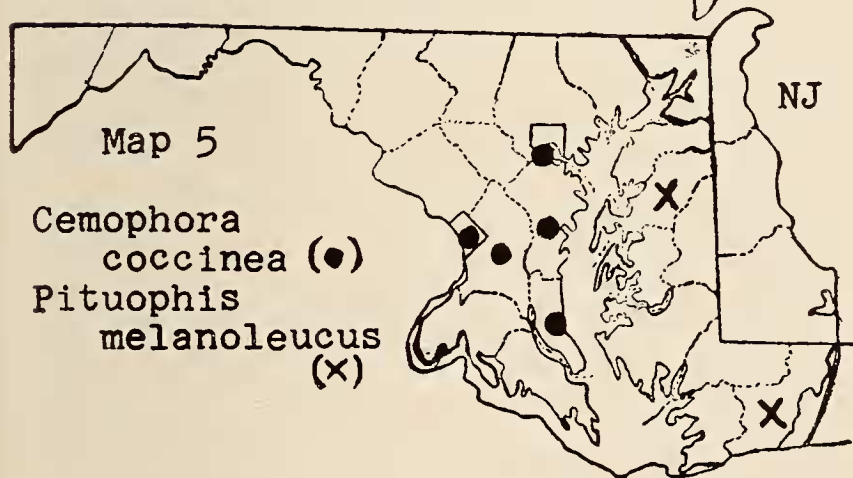
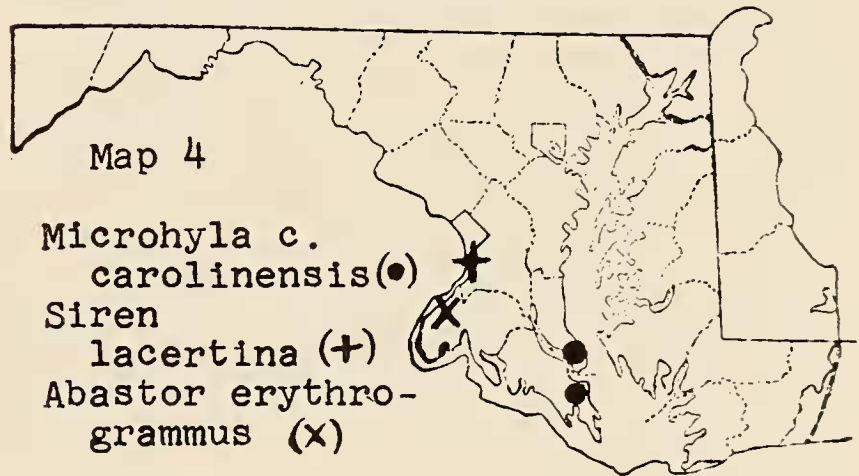
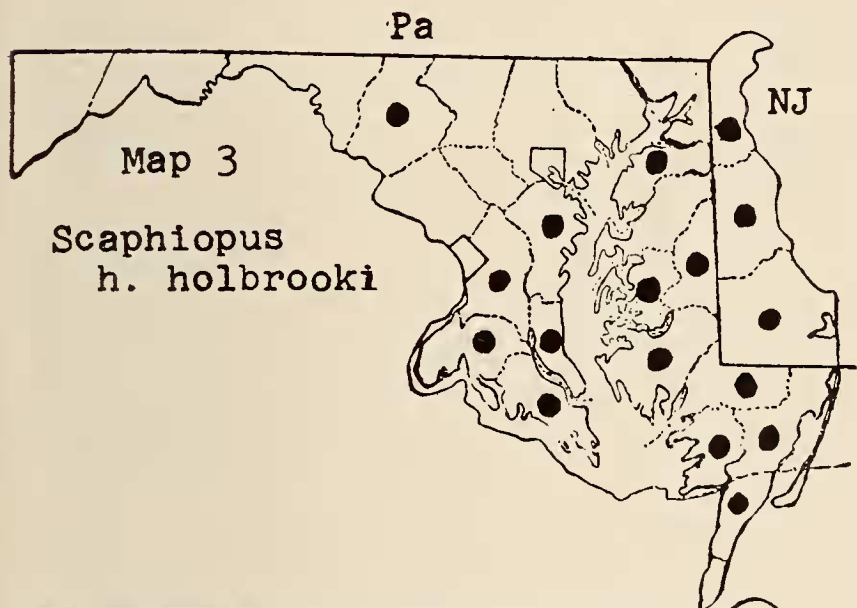
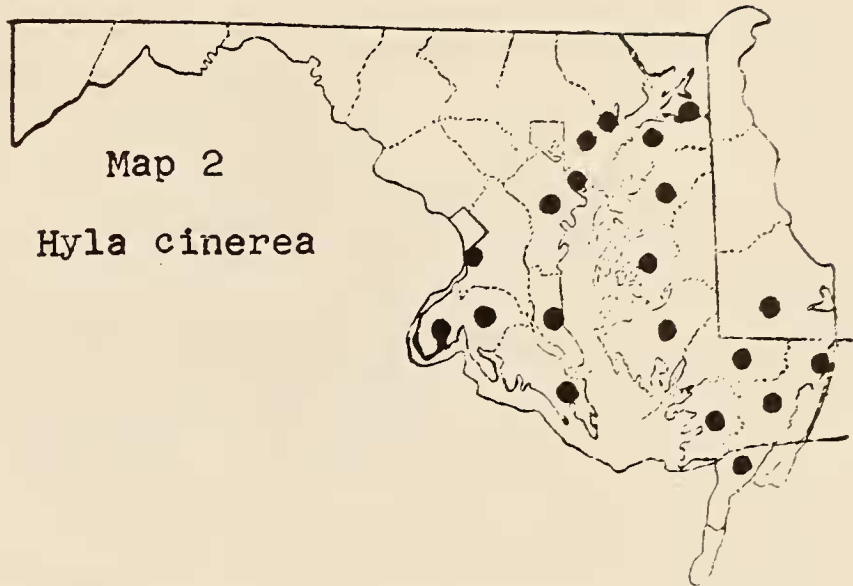
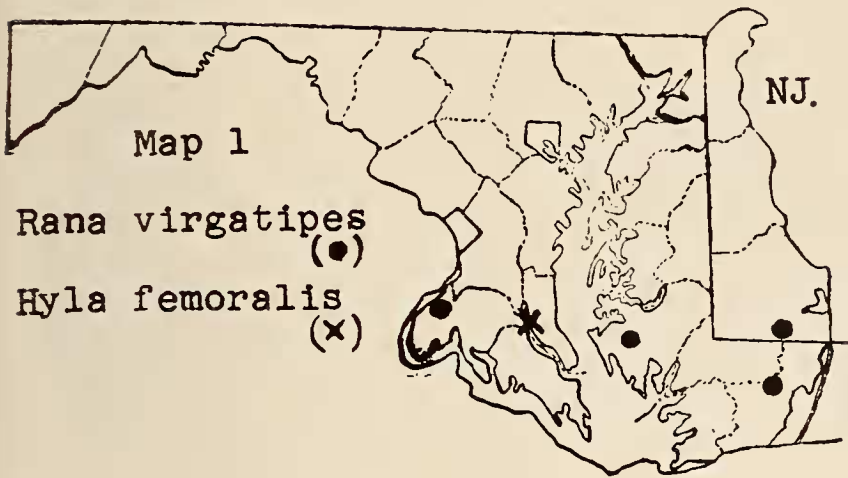
3. *Hyla cinerea* (Schneider). Coastal Plain from Delaware and Maryland south through the lowlands of the Atlantic and Gulf States from Virginia to Texas; north in the Mississippi Basin to southern Illinois. Delaware (Sussex), Maryland (Cecil, Kent, Queen Annes, Talbot, Dorchester, Harford, Baltimore (coastal), Somerset, Wicomico, Worcester, St. Marys, Charles, Calvert, Anne Arundel, Prince Georges). See Reed, *Journ. Washington Acad. Sci.* **46**(10): 328-332. 1956. Delmarva Virginia (Accomac and Northampton). See Reed, *Journ. Washington Acad. Sci.* **47**(3): 89-91, 1957. Map 2.

4. *Hyla andersoni* Baird. Southern New Jersey; Southern Pines, N. C.; Anderson, S. C.; coastal Georgia. It is interesting to note that *Rana virgatipes* has also been recorded from southern New Jersey, from Southern Pines, N. C., and from coastal Georgia. See Davis, *Amer. Nat.* **41**(481): 49-51, 1907.

5. *Scaphiopus holbrooki holbrooki* (Harlan). Eastern United States from Massachusetts to Florida, west to Louisiana, eastern Texas, and Arkansas, north in the midwest to West Virginia, southern Ohio, Indiana, and Illinois. Although this toad ranges northward from our region in Maryland into central Pennsylvania by way of the Frederick Valley and the coastal recesses in that region, it is limited to the coastal regions. See Reed, *Herpetologica* **12**(4): 294-295. 1956. Maryland (Frederick, St. Marys, Charles, Calvert, Prince Georges, Anne Arundel, Worcester, Wicomico, Somerset, Dorchester, Talbot, Caroline, Kent); Delaware (Sussex, Kent, New Castle) and Delmarva Virginia (Accomac). Map 3.

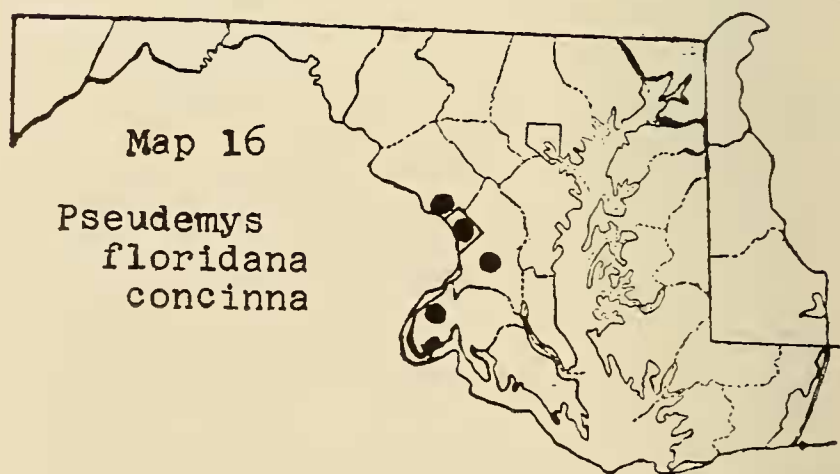
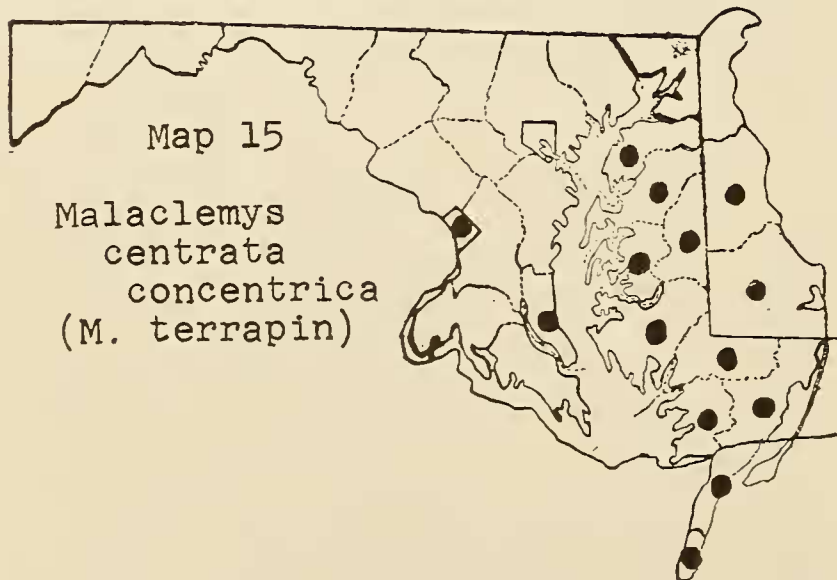
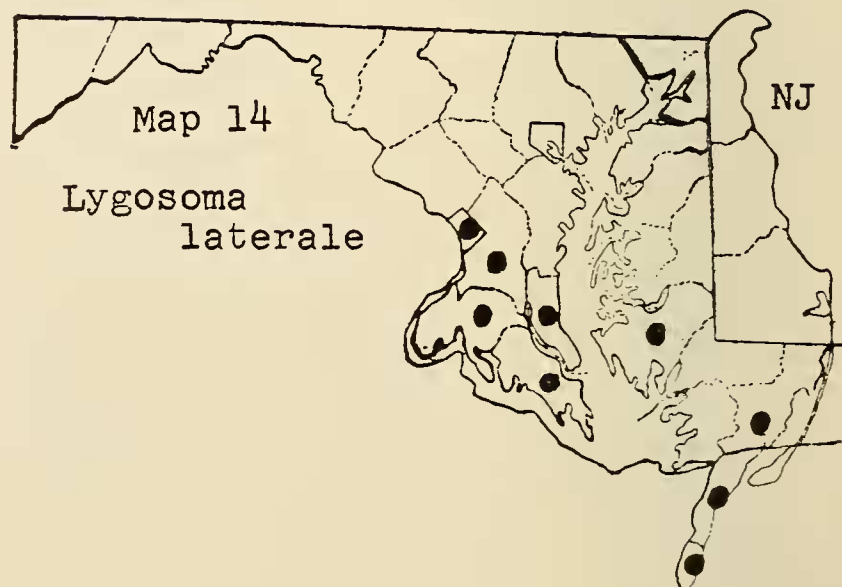
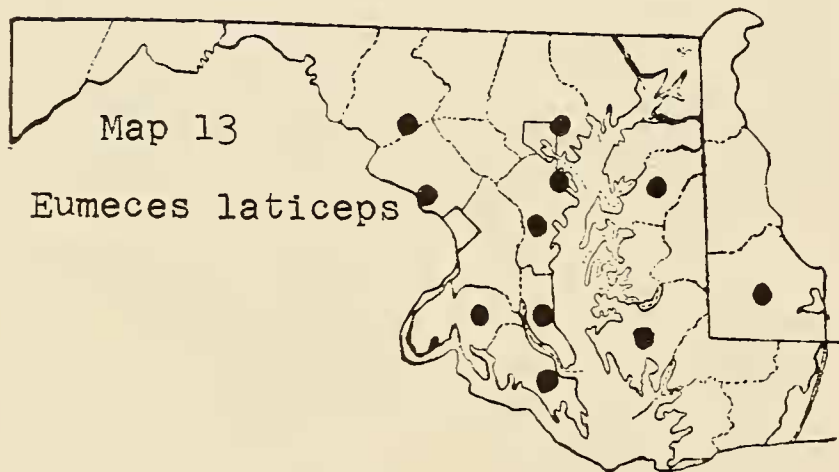
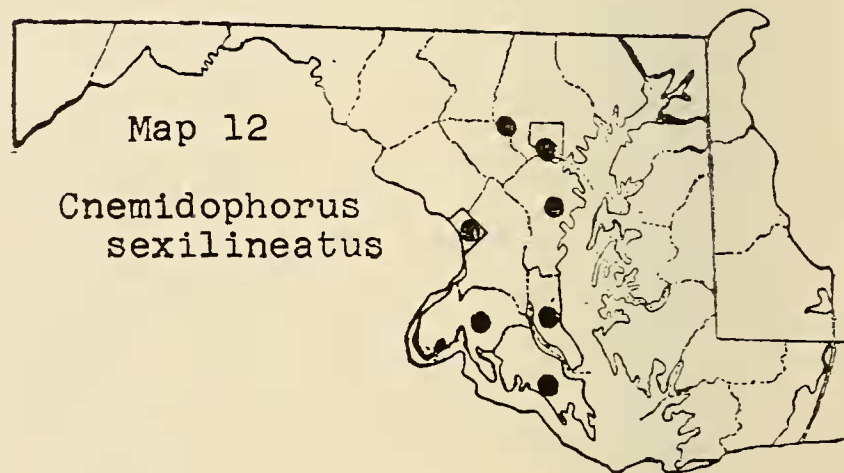
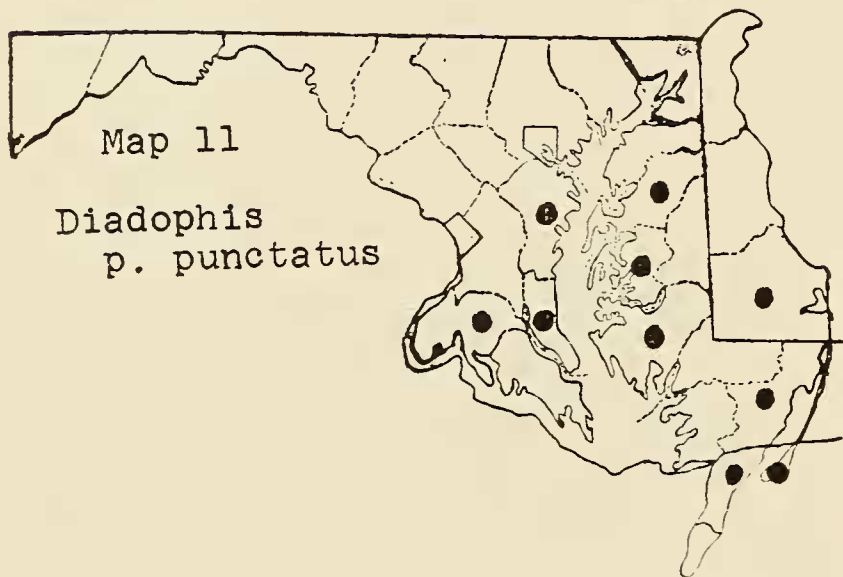
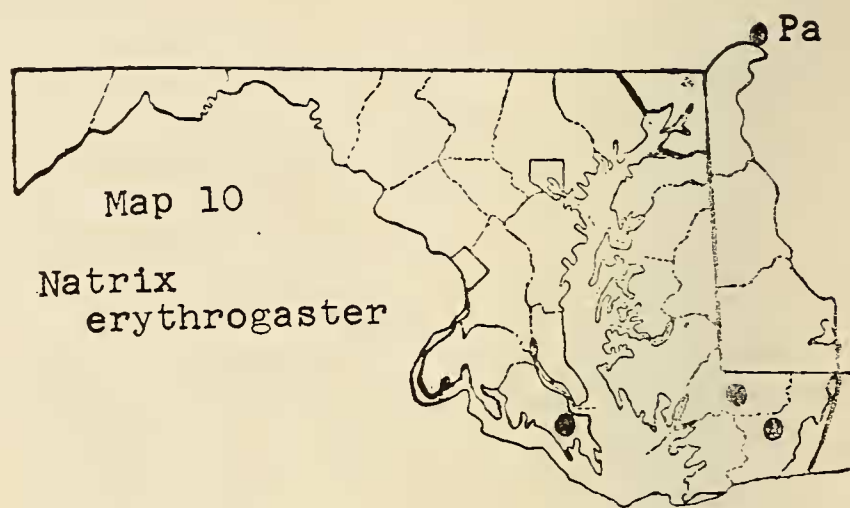
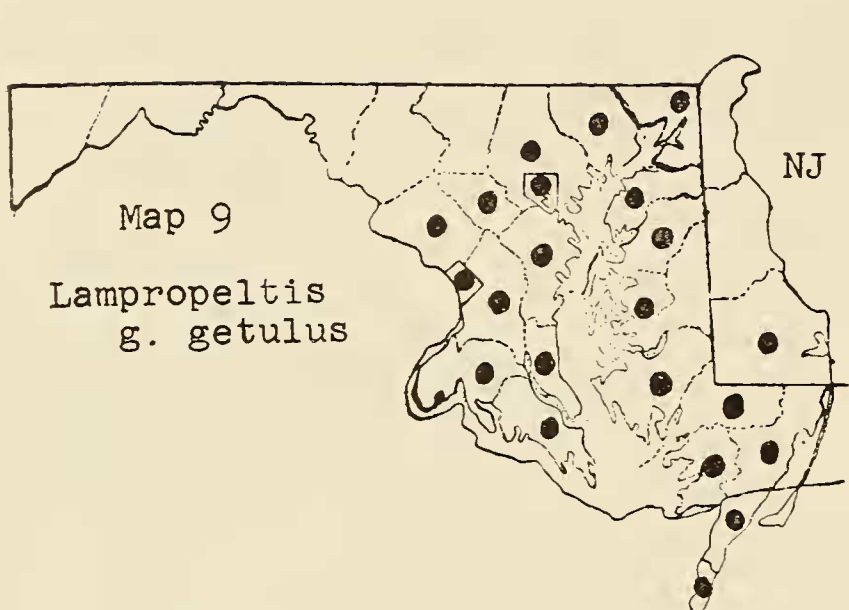
6. *Microhyla carolinensis carolinensis* (Holbrook). Maryland to Key West, Fla., west and north to Illinois and Missouri, Kansas, eastern Oklahoma, and eastern Texas. Maryland (Calvert and St. Marys). See Noble and Hassler, *Copeia* 1936(1): 63-64; Mansueti, *Bull. Nat. Hist. Soc. Maryland* **12**(3): 33-34. 1942. Map 4(●).

7. *Siren lacertina* Linnaeus. Maryland and



Virginia on the west side of Chesapeake Bay, coastal North and South Carolina, southern Georgia and Alabama, throughout Florida. Maryland and District of Columbia (Potomac Flats). See Hay, Proc. Biol. Soc. Washington 15: 121-146. 1902. Map 4(+).

S. Abastor erythrogrammus (Latreille). Maryland (Charles) through the Lower Atlantic Coastal Plain to central Florida and Alabama. Maryland (Charles: 4 miles South of Indian Head, Stump Neck, between Mattawoman and Chicomuxen Creek. H. Hassler.) See McCauley,



The reptiles of Maryland and the District of Columbia, 1945; Copeia 1939(1): 54. Map 4(X).

9. *Cemophora coccinea* Blumenbach. Southern New Jersey, southward through the Atlantic and

Gulf States, west to Louisiana and Oklahoma. Maryland (Calvert, Baltimore, Prince Georges, Anne Arundel), District of Columbia. See Reed, *Contributions to the herpetology of Maryland and*

Delmarva, No. 8. Snakes of Maryland, etc. 1956. Map 5(●).

10. *Elaphe guttata guttata* Linnaeus. Southern New Jersey to the tip of Florida, west to north-eastern Mexico, north in the interior to Kentucky and Missouri and in the west to western Colorado and Great Salt Lake. Maryland (Prince Georges, Anne Arundel, adjacent Montgomery, St. Marys, Talbot, Wicomico), District of Columbia and Delaware (Sussex). See Reed, *Contributions to the herpetology of Maryland and Delmarva, Nos. 8 and 11.* 1956. Map 6.

11. *Lampropeltis calligaster rhombomaculata* Holbrook. Southern Maryland and Virginia, south to eastern Tennessee and central Florida, and westward through Alabama and Mississippi. Maryland (Prince Georges, Anne Arundel, adjacent Montgomery) and District of Columbia. See Reed, *Contributions to the herpetology of Maryland and Delmarva, No. 8,* 1956. Map 7.

12. *Lampropeltis doliata temporalis* Cope. Southern New Jersey, Delaware, and Maryland through Virginia and North Carolina. Maryland (Prince Georges, Calvert, St. Marys, Worcester), District of Columbia and Delaware (TYPE LOCALITY). Map 8.

13. *Lampropeltis getulus getulus* (Linnaeus). Southern New Jersey to northern Florida, westward to southeastern Alabama. Maryland (Garrett, Montgomery, Prince Georges, Charles, St. Marys, Calvert, Anne Arundel, Howard, Baltimore City, Baltimore, Harford, Cecil, Queen Annes, Kent, Talbot, Dorchester, Wicomico, Worcester, Somerset), District of Columbia, Delaware (Sussex), and Delmarva Virginia (Accomac and Northampton). See Reed, *Contributions to the herpetology of Maryland and Delmarva, Nos. 8 and 11.* 1956, and *Contributions to the herpetology of Virginia, No. 3,* in Journ. Washington Acad. Sci. **47**(3): 89-91. 1957. Map 9.

14. *Natrix erythrogaster erythrogaster* Forster. Maryland southward in the Coastal Plain and adjacent Piedmont to northern Florida. Maryland (St. Marys, Wicomico, and Worcester). See Reed, *Contributions to the herpetology of Maryland and Delmarva, No. 8 and 11.* 1956. Map 10.

15. *Diadophis punctatus punctatus* Linnaeus. Coastal Maryland to Florida. Maryland (Charles, Calvert, Anne Arundel, Queen Annes, Talbot, Dorchester, and Worcester), Delaware (Sussex), and Delmarva Virginia (Accomac). See Reed, *Contributions to the herpetology of Maryland and Delmarva, Nos. 8 and 11.* 1956. Map 11.

16. *Pituophis melanoleucus melanoleucus* (Daudin). New York (Rockland) south to South Carolina and westward to eastern Tennessee. Maryland (Queen Annes and Worcester). The New York locality is just north of the New Jersey border. Map 5(×).

17. *Cnemidophorus sexlineatus* (Linnaeus). Maryland to Key West, Florida, west to eastern Texas, north in the interior to Indiana and Illinois, and along the rivers in southern Wisconsin and Minnesota, and through Oklahoma to South Dakota and southeastern Wyoming. Maryland (Anne Arundel, Calvert, Charles, St. Marys, Baltimore and Baltimore City) and District of Columbia. Absent from the Delmarva Peninsula. See Reed, *Contributions to the herpetology of Maryland and Delmarva, No. 6. The Lizards of Maryland, etc.* 1956. Map 12.

18. *Eumeces laticeps* (Schneider). Southern Pennsylvania and Delaware, southward to Florida, westward through Ohio, Indiana, Illinois and southeastern Missouri, west to eastern Kansas, eastern Oklahoma and eastern Texas. Maryland (Anne Arundel, Baltimore, Calvert, St. Marys, Charles, Montgomery, Queen Annes, Dorchester, Frederick) and Delaware. See Reed, *Contributions to the herpetology of Maryland and Delmarva, No. 6,* 1956. Map 13.

19. *Lygosoma laterale* (Say). Southern New Jersey and southeastern Pennsylvania southward; southern Ohio, Indiana, Illinois, and northern Missouri; westward to eastern Kansas, eastern and central Oklahoma, and Texas. Maryland (Prince Georges, Calvert, Charles, St. Marys, Dorchester and Worcester,) District of Columbia and Delmarva Virginia (Accomac and Northampton). See Reed, *Contributions to the herpetology of Maryland and Delmarva, Nos. 6 and 11; Contributions to the Herpetology of Virginia, No. 3,* in Journ. Washington Acad. Sci. **47**(3): 90, 1957. Map 14.

Note: *Eumeces inexpectatus* Taylor ranges as far north as the northern shores of Northern Neck, Virginia, which is the southern shore of the Potomac River. The Maryland line extends to the southern bank of the Potomac River. Northumberland County, Va., 1 mile north of Heathsville, near Clarks Mill, May 15, 1954, Reed 854. See Reed, *Herpetologica* **12**: 136. 1956, and *Contributions to the herpetology of Virginia, No. 2, The herpetofauna of Northern Neck, Virginia,* in Journ. Washington Acad. Sci. **47**(1): 21-23. 1957.

20. *Pseudemys floridana concinna* (LeConte). Atlantic Coastal Plain from Maryland to Alabama, mostly above the Fall Line and into eastern Tennessee. Maryland (Montgomery, Prince Georges, Charles) and District of Columbia. See Reed, *Contributions to the herpetology of Maryland and Delmarva*, No. 7. 1956. Map 16.

21. *Malaclemys centrata concentrica* (Shaw). Coastal Plain from Massachusetts to North Carolina, including Delaware and Chesapeake Bays and to Florida. Maryland (Calvert, Somerset, Caroline, Queen Annes, Talbot, Wicomico, Dorchester, Kent, and Worcester), District of Columbia, Delaware (Sussex and Kent) and Delmarva Virginia (Accomac and Northampton). See Reed, *Contributions to the herpetology of Maryland and Delmarva*, Nos. 7 and 11. 1956; *Contributions to the herpetology of Virginia*, No. 3, in Journ. Washington Acad. Sci. 47(3): 89-91. 1957. Map 15.

Incidentally, there are four deep-sea turtles from tropical and semitropical south Atlantic waters that find their way up the Atlantic Coastal area as far north as Maryland, Delaware, Massachusetts, and Nova Scotia. Specimens of these have been recorded from the lower Potomac River and the Chesapeake Bay or from Delaware Bay in our region. These turtles are usually stragglers that come up the Gulf Stream from time to time. However, large numbers have been seen and at times have been caught in the Chesapeake Bay off Virginia and southern Maryland. As many as five *Caretta caretta* have been caught in the fish nets in a single day by a single fisherman. Capt. W. J. Biddlecomb of Fairport, Va., reports many of these and other deep-sea turtles in the waters off Great Wicomico Light House. The records for these turtles are recorded in Reed, *Contributions to the herpetology of Virginia*, No. 2, *The herpetofauna of Northern Neck, Virginia* (Journ. Washington Acad. Sci. 47(1): 21-23. 1957). Also, Maryland and Delmarva specimens are annotated in *The contributions to the herpetology of Maryland and Delmarva*, Nos. 7 and 11. 1956.

22. *Caretta caretta caretta* (Linnaeus). Atlantic

and Gulf coasts of United States from Maryland and the Chesapeake Bay southward. Maryland (Calvert, lower Potomac River and Chesapeake Bay, Dorchester and Worcester), Delaware (Sussex), and Delmarva Virginia (Accomac and Northampton). See Reed, *Contributions to the herpetology of Virginia*, No. 2, l.c., 1957.

23. *Chelonia mydas mydas* (Linnaeus). Tropical and subtropical Atlantic waters, northward to temperate zones. Maryland (Calvert). See Reed, *Contributions to the herpetology of Maryland and Delmarva*, No. 7. 1956.

24. *Dermochelys coriacea* (L.). Atlantic and Gulf coasts, occasional as far north as Nova Scotia. Maryland (Calvert and Chesapeake Bay) and Delmarva Virginia (Accomac). See Reed, Journ. Washington Acad. Sci. 47(1): 21-23. 1957, for picture of 700-pound specimen caught off Northern Neck, Va.

25. *Lepidochelys (olivacea) kempfi* (Garman). Atlantic coast north from tropical waters to Massachusetts. Maryland (St. Marys, lower Potomac River and Chesapeake Bay). See Reed, *Contributions to the herpetology of Maryland and Delmarva*, No. 7. 1956; *Contributions to the herpetology of Virginia*, Nos. 2 and 3. 1957, both in Journ. Washington Acad. Sci. 47(1) and 47(3), respectively.

The 21 herptiles listed above represent about 25 percent of the species in the herpetofauna of Maryland and Delmarva. Seven of these find their northern limit in southern Maryland (the Coastal Plain area west of Chesapeake Bay); eight of the species, found on the Coastal Plain, find their northern limit in coastal New Jersey; two range into southeastern Pennsylvania along the Delaware River. The accompanying maps indicate the counties in Maryland, Delaware, the District of Columbia, and Delmarva Virginia where the various species have been collected. References are given with each species where an annotated list of specimens may be found. Contributions 5 through 11 to the *Herpetology of Maryland and Delmarva* have been published by the author and are available from the Reed Herpetorium, 10105 Harford Road, Baltimore 34, Md.